The CAPITOL HILL MONITOR

OCTOBER 1994

NINE YEARS AND SEVERAL TRUNKED SYSTEMS LATER

Scanner Listeners Keep Pace with Technology

by Alan Henney

Often considered a trend-setter in the field of public safety, the City of Miami was one of the first to develop an amphibious fire engine and to transmit electrocardiograms using two-way radios. But in October 1985, the City of Miami stunned scanner enthusiasts when the city's agencies started communicating on an 800 MHz trunked radio system -- a revolutionary communications system, which sounded ideal in theory, but had never been built on the large scale required to meet the demands of a municipal government.

Business radio users had used leased trunked systems for years, but it wasn't until Miami installed its trunked system that scanner enthusiasts began to look toward the future with increasing pessimism.

Since Miami's trunked system went on-line, hundreds of municipalities across the country have installed similar systems. In a few cases, members of the press who are willing to spend the money are the only "outsiders" to officially receive permission to own a radio on a municipal trunked system. Taxpaying scanner enthusiasts, unfortunately, are rarely provided an opportunity to officially purchase a radio which will track conversations on the same system.

Efficiently monitoring the radio traffic on Miami's trunked radio system with a mere scanner is difficult, and during peak periods, almost impossible. In order to keep up with a pioneer, you must also be a pioneer. Some skilled scanner enthusiasts, who got fed up with trying to monitor trunked systems like Miami's on a scanner, which included the chore of locking out the daily data channel, pioneered their own crusade to keep pace with the new technology.

As cable TV hackers have learned, the best way to beat a system is to use the same equipment the system itself uses and modify it as necessary. The process starts with the purchase of an appropriate Motorola radio, programming software and cables -- the same (or similar) equipment used by the City of Miami. All of this can be purchased openly and legally. One necessary ingredient which hackers cannot purchase from Motorola is the coveted information required to program the radio. Hackers have, however, been able to obtain this information from various sources.

After spending around $3,000 for equipment some five years ago, a few die-hard scanner listeners became the first outsiders to monitor the fledgling public safety trunked systems just as a firefighter or police officer would do -- except with more capability. Using Motorola radios such as the STX, Syntor, MaxTrac, Saber SI and MTS 2000, these scanner buffs can monitor both police and fire talkgroups (or subfleets) on the same radio, select scan lists and customize radio options as they desire. Scanner buffs with such radios monitor talkgroups on public safety trunked systems as if they were conventional radio frequencies.

PROLIFERATING TECHNOLOGY

After losing numerous jurisdictions to trunked radio systems across the nation, many loyal scanner listeners, like their colleagues in South Florida, are also keeping pace with the technology. Since the late 1980s, when reports of hackers programming phantom STX radios first surfaced, equipment, software and the technology have become more affordable and more available to hackers and other outsiders across the nation. Die-hard police and fire listeners, who have the money and access to the technology, can now possess Motorola trunked radios solely for monitoring purposes.

THE PROCESS: How do they do it?

The process starts with procuring the right 800 MHz radio. Hamfests offer good opportunities to purchase used Motorola equipment at reasonable prices. Until recently Motorola's STX was the radio of choice,

because it was the most common portable radio used by Motorola public safety trunked systems. The price for a used working STX usually ranges from $800 to $1,200, although some have been purchased for as low as $400. The biggest drawback of the STX is that it only scans five talkgroups, all of which must be within the same system.

Not just any Motorola STX radio will work, however. Motorola produced numerous models of the popular STX portable -- each designed for a specific trunking protocol and version (Privacy Plus or Smartnet). Some STX radios are designed for conventional operation only. For the purpose of monitoring public safety systems, the ideal STX radio to obtain is the 821 enhanced, which supports Smartnet I, II and IIi (in addition to conventional operation).

Motorola trunked systems fall into two broad categories: Privacy Plus for the private sector, and Smartnet for public safety users. While similar to Privacy Plus, Smartnet offers several features which are geared toward public safety, such as faster access, dynamic regrouping, emergency call, multiple priority access levels and various others.

The original Smartnet system, known as SmartNet I, was popular in the late 1980s and early 1990s. SmartNet II is the current system. SmartNet IIi, which Arlington County uses, is a hybrid between the two. System IIi allows radios in the trunk to use talkgroups (or subfleets) from either system I or II. This way, Arlington County radios can easily interface with the system I talkgroups used by Alexandria's trunked system.

Now that STX radios are out of production, and used STX radios are in short supply, finding an appropriate radio with usable software may be a difficult task. With numerous digital radio systems in the planning stages, a used digital Saber Astro might make a good candidate for monitoring both digital and analog systems in the future, assuming the software is available. Unlike the STX, the newer radios scan multiple talkgroups across numerous systems, although the programming is more involved. The Astro Saber may be one of a few viable alternatives for scanning until a digital scanner hits the market, if ever.

HOW THEY GET THE SOFTWARE AND MAKE IT WORK

Motorola sells the STX software for $350. Virtually anyone can purchase the software from Motorola. Programming the radio, however, is a different story. The STX software can read conventional and trunking data from an STX. But as the program comes, the program can only program the radio for conventional channels, or modify any existing trunking data currently in the STX (only for the trunked system for which it was previously programmed). Data for other trunked systems cannot be entered, nor can the software (by itself) be used to copy the existing trunking data into a different radio.

Using the STX software, new trunking data can officially be programmed into the radio in only one of two ways. (The programming process for the STX radio is similar to Motorola's other 800 MHz radios.)

In the first method the person doing the trunked system programming downloads what is known as the "TCMS" (trunking control management system) file directly from Motorola. The TCMS file contains the trunking data for one specific system and only allows programming of that one system through the STX software. Conventional channels can be programmed at any time.

The second method makes use of a "system key." The system key attaches to a PC's serial port and permits the programmer to program trunking (and of course conventional) data into a radio for any system for which the key allows. System keys are available exclusively through "inside sales" of Motorola and are usually only sold to owners of Motorola trunked systems. Hackers reportedly modify the software or hardware to bypass the system key and thus gain full programming privileges.

LEGAL RAMIFICATIONS

Motorola's Master Radio Service Software license agreement states that its software and archive (data) files contain "valuable proprietary information" as well as Motorola trade secrets. The license prohibits unauthorized dissemination, distribution, modification, reverse engineering and disassembly of Motorola software or archive files. Federal copyright statutes provide Motorola with additional protection against unauthorized distribution or modification to its software and archive files.

Articles appearing last month in the St. Petersburg Times and the Sun-Sentinel state that Motorola is pursuing legal action against Francis Harris, 25, of Tamarac, Florida. At the request of Motorola, a federal judge issued a preliminary injunction to prevent Harris from using copyright and alleged trade secret information to program his Motorola trunked radios. No date was set for a full injunctive hearing, but the legal action taken against Harris demonstrates how seriously Motorola views abuse of its software and equipment.

Harris, who acted as his own attorney, the papers reported, told the court he programmed the trunked radios to research his book of radio frequencies and communications techniques used by various law enforcement agencies. The action by Motorola, Harris said, was an effort to censor the 1995 edition of his book, a compilation of radio frequencies and trunking access codes used by law enforcement and other agencies. The 1994 edition of his book sells for $30 at amateur radio shops throughout Florida.

"My radios I use for my own personal analysis of my research for my book," Harris told the judge. The data, codes and equipment Harris said he used to program the trunked radios are available on the open market. "The trade secrets," he stated, "are not a secret as Motorola claims they are."

Motorola charged that Harris distributed reprogrammed trunked radios and that he threatened to publish proprietary trunking information which would allow other radio hackers to tune into law enforcement radio communications which Motorola indicated are otherwise secure.

Motorola attorneys told the judge that Harris could use his reprogrammed radios to cut into emergency communications networks, endangering public safety. If Harris did use his radio to transmit messages, the attorneys claimed, it would create a fraudulent charge to the account of the agency or owner of the network. Harris is now reportedly also under investigation by the Secret Service for possession of equipment used to commit cellular fraud.

Motorola assures local governments that its safeguards make the company's trunked radio systems secure and resistant from hackers such as Harris. Motorola also offers rewards of up to $10,000 for the successful prosecution of anyone caught copying, modifying or otherwise illegally using its software or hardware. Motorola's tight safeguards and various federal laws are unable to stop determined hackers from obtaining the data and technology necessary to program their own trunked radios. As secure as the process appears, it is vulnerable to clever hackers, especially those who are proficient in assembly language programming, and individuals with good connections.

HOW THEY PROGRAM THE RADIO

Once a hacker has the radio, cable, interface box and usable programming software, getting the trunking data remains the final obstacle. Reading the data from a friend's radio is often the quickest and easiest way hackers obtain basic information. To monitor both police and fire departments, this process requires friends in each department who have radios compatible with the available cables and software.

The talkgroup configuration of trunked radios, however, often varies greatly, even within a agency. A fire chief, for example, likely has access to several talkgroups which most firefighters do not have in their radios. So getting the complete data directly from a source within the municipal government or another person who has access to the master TCMS file is most desirable.

When programming, the radio hackers normally change the radio's identification number, also known as an individual ID (since each portable or mobile radio is often assigned a specific radio). If the data was downloaded from a borrowed radio, this helps protect the source of the information.

Using the same radios the trunked system itself uses does have its drawbacks. Disabling the transmitter is important. Should the radio's push-to-talk (PTT) switch accidentally get keyed, the radio will identify itself to the system which it is monitoring. An unknown or duplicate radio ID would easily tip-off an alert dispatcher that a phantom radio is monitoring the trunked system.

To prevent an accidental keying of the radio some hackers tape popsicle sticks around the radio's PTT switch. But this may not be enough to avoid detection by the system. Depending upon how the system is configured, a dispatcher can query a particular talkgroup and attempt to force all radios to identify. Again, a duplicate or unknown radio ID would stick out -- especially if the ID belonged to a public works vehicle which was monitoring a police channel!

While intended for emergencies, some Smartnet systems can even enable the transmitter of a particular radio ID to monitor what's happening. So hackers may find that disabling the transmitter is essential to maintaining anonymity.

Once the system operator learns of a duplicate or fake radio designation, the phantom radio can be "put to sleep" by the system operator. "Waking up" the radio is a difficult task for hackers and generally requires the replacement of a $300 controller board. The system operator, however, can easily wake up the radio by sending a command through the system controller.

In Miami, where unauthorized cloning of the city's trunked radios is a common occurrence, the system operator routinely queries the system for security breaches. Technicians reportedly discover several fake or duplicate radio designations each month. In some cases, the radio shop accidentally programmed a radio with the wrong designation -- but not always.

Even disabling the radio's transmitter may not be enough to protect a phantom radio. Broward County, Florida, one source warns, is in the process of implementing a complex system to deactivate phantom radios. Over a period of several days, Broward County plans to "put to sleep" all invalid (unused) radio IDs. This procedure will supposedly be repeated on a regular basis in an attempt to discourage hackers from monitoring the county's trunked system.

A SAMPLE TRUNKED SYSTEM PERSONALITY

Programming a trunked radio is much different than programming a conventional synthesized two-way radio. Trunked radios have personalities; the STX allows for as many as 96. Each personality can contain a single conventional channel (repeater or simplex), or a trunked system fleet with up to 16 subfleets. The personality number often corresponds to the designation referenced on the radio. In Arlington County, for example, talkgroup "1-Adam" is the fire dispatch channel (also simulcast on 154.13). The "1" is the personality/fleet number and the "Adam" is the subfleet (talkgroup).

In lieu of a frequency, each subfleet is assigned a unique three-digit hexadecimal (base 16) number. A failsoft frequency, however, may be assigned to each subfleet (or the entire fleet) for emergency use should a central site controller malfunction. While in failsoft mode, frequencies of the trunked system revert to conventional repeater channels.

Here is an example of a generic fire personality (fleet #1 with 12 subfleets). Each agency on the trunked system, like the fire department, would likely have at least one personality/fleet configured for its own needs. Additional personalities could contain a conventional repeater or simplex channel or additional fleets for the same department.

Hypothetical Fire Personality #1

Tlk Grp	Failsoft	Sub Name
A...300	859.9875	DISP (AKA "1-A")
B...303	859.9875	OPS1
C...306	859.9875	OPS2
D...309	858.5875	OPS3
E...30C	858.5875	CMD1
F....30F	858.5875	CMD2
G...312	857.9875	CMD3
H...315	857.9875	ADMN
I.....318	857.9875	FPRV
J....31B	856.5875	FINV
K....31E	856.5875	EMS1
L....321	856.5875	EMS2
M....X		[unused]
N....X		[unused]
O....X		[unused]
P....X		[unused]

The first column is the subfleet (talkgroup) letter designation, which is followed by the subfleet's unique hexadecimal code. The hexadecimal codes used in the above example appear in increments of three, starting with 300 -- although nearly any hexadecimal number from 0 (zero) to FFF could have been chosen in any order as long as each was unique. In the third column is the failsoft frequency followed by the subfleet's name. The name is displayed on the radio's LCD.

Individual voice frequencies used by the trunked system are not programmed into the radios -- only the four data channels are. In theory the central controller can dynamically assign virtually any of several hundred 800 MHz frequencies to a talkgroup as required. In this manner new trunked voice channels may be added or removed without recalling the radios for re-programming.

WHAT REMAINS FOR THE FUTURE OF SCANNING?

What has become the inexpensive and versatile scanning receiver may soon be a treasured antique. As we approach the turn of the century with both trunking and digital communications systems threatening the future of scanner listening, die-hard hobbyists continue to aggressively pursue their hobby -- which is becoming both more expensive and ever more challenging. Changes have occurred so rapidly that many scanner buffs wonder what the future could possibly have in store. While no one knows for sure, one thing is for certain: only time will tell.

Astro, MaxTrac, Motorola, MTS 2000, Privacy Plus, Saber, Smartnet, STX and Syntor are trademarks of Motorola, Inc.

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US CAPITOL POLICE UPDATE

As reported in previous CHM issues, the Capitol Police switched around several radio frequencies on Memorial Day weekend. Unlike the former radio configuration each channel is now assigned a specific use and CTCSS frequency. The entire channel configuration, appears below. Radios assigned to specialized units likely include channels beyond those listed below.

1r/6s	169.2250 [156.7]	Inside Units
2r/7s	165.5375 [118.8]	Outside Units
3r/8s	170.1750 [107.2]	Special Events
4r/9s	162.2500 [146.2]	Wide Area
5r/10s	162.6125 [127.3]	Command

DCFD ADOPTS CHANNEL CHANGES

As mentioned in the May newsletter, on April 3 the District Fire Department instituted 60-day pilot programs that modified the channel configurations. The programs, states Special Order #49, "were extremely successful" and are now permanent. As a result, fire channel 4, 154.205, is now the primary fireground channel and fire channel 2, 154.235, is used by fire apparatus assigned to EMS calls. In addition, the word "communications" replaces "headquarters" when calling the Communications Division over the radio. Many thanks to District firefighter David Purcell for keeping us posted.

A CASE OF TOO MANY ENGINES AND NOT ENOUGH AMBULANCES?

An editorial response by Charles V. Hutchinson

In response to one of last month's NewsScan articles which summarized the frustration a Washingtonian Magazine editor had with regard to emergency ambulance service in the District, Charles writes the following.

I understand Ms. Leslie Milk's article in the Washingtonian, and understand the frustration and confusion experienced by citizens of the District. Most large cities have a pretty good EMS system for the citizenry. However, taking in consideration commuters, tourists,

transients and others who more than double the population of a city during daylight hours, those EMS systems can be overtaxed. When this happens, the EMS section of that city's fire department almost always has a contingency plan.

These plans consist of dispatching engines, trucks or rescue squads as first responders [as was the case in the Washingtonian article]. These first responders are usually trained emergency medical technicians with skills to handle almost any emergency from broken arms to stabbings, from childbirth to mental patients.

As a professional firefighter for more than 20 years with Baltimore City, I can explain how we handle the EMS crisis up north. The Baltimore City Fire Department has only 18 medic units for the entire city. At any given time during the day or night, all 18 medics may be out on calls. If you listen to fire channel 5, 154.415, you'll hear the dispatcher announce a "red medic alert." When this is announced, four ambulances are placed in service and four fire engines are placed out of service. The personnel from the temporarily disbanded fire companies become ambulance attendants.

If things get really bad, extensive use of mutual aid is requested from Baltimore and Anne Arundel counties. If these jurisdictions can spare any units, one will be sent. If not, an engine or truck company will be dispatched as first responders, usually only to comfort the victim and assure them that a medic unit is on the way -- sometimes from as far as the other side of the city.

So to answer question posed in last month's issue, "Why there are so many fire engines for EMS runs when no ambulance or medic units are available?" that question should be put to the city governments of the affected cities. Only the high officialdom can make positive changes. As for the firefighters, EMTs and paramedics, who are out on the front-line every day, they do the best they can and still are professional with what they have to work with. CVH

NEWSSCAN

by Brent Baker

DC GETS NEW EMS DIRECTOR. Robert R. Bass, the director of the D.C. Emergency Medical Services, reports the Washington Post, left his position to take over as executive director of the Maryland Institute for Emergency Medical Services, which will reportedly pay him about $200,000 a year, almost double his D.C. paycheck of $104,000.

Mayor Sharon Pratt Kelly credited Bass with dramatically improving a widely criticized system. Kelly named Georges C. Benjamin, a former acting city public health commissioner who helped to choose Bass, as an interim replacement for Bass early last month. According to the Post, Benjamin, who has run D.C. General's Community Health and Ambulatory Care Department as well as the Walter Reed Army Medical Center Emergency Medicine Department, said he probably would seek to make this position permanent.

Under Bass, the Post noted, "emergency response time dropped 10 percent, from 9.9 to 8.9 minutes, and all emergency units, including all fire engines and boats, have been equipped to provide basic life support that doesn't require a trained paramedic, Fire Chief Otis J. Latin Sr. said. Bass said a unit with the equipment can respond to a call five minutes faster than paramedics could. Bass also expanded the number of paramedic ambulances from five in 1992 to 12 this year. The city plans to implement a new dispatch system that will prioritize calls according to their urgency, according to City Administrator Robert L. Mallett."

EVERYTHING DC DIDN'T WANT YOU TO KNOW ABOUT THE METROPOLITAN POLICE DEPARTMENT. In a four-part series entitled "Law and Disorder," consisting of 12 articles ending on Aug. 31, Washington Post staff writers Mary Pat Flaherty and Keith Harriston examine the problems of the Metropolitan Police Department in what's probably the most comprehensive report ever on the agency.

Because of the enormous size of the four-day series, we hardly have room here for even a brief summary -- but here it goes! The articles cover nearly every aspect of DC police corruption and incompetence, including failure to suspend corrupt officers, threats made by officers, low hiring standards, poor training, inadequate background checks, lowered training academy standards, undercover drug buys gone bad and the list continues. Here are a few choice excerpts...

"Since 1991," reads one of the leads, "256 D.C. officers who were fired or suspended have had their penalties overturned by courts and labor arbitrators solely because the department took too long to mete out punishment."

"The problems besetting the D.C. police department aren't confined to the lower echelon, where the newer officers are," Flaherty observed. "Department records show that since 1989, eight supervisors -- from the rank of sergeant to deputy chief -- have been arrested or summoned to appear in a criminal court."

"By the time Edward Wright had been on the police force for 18 years," Flaherty wrote in another lead, "he'd received a series of suspensions and official criticism for

poor conduct, roughing up a prisoner, missing radio calls, unauthorized absences and crashing his patrol car into a parked Volvo after he'd fallen asleep at the wheel."

"Two ambitions drove Charles Smith in the summer of 1989. The first was to up his income as a member of the R Street Crew, a murderous drug gang. The second was to join the D.C. police force. By fall," the Post reported, "Smith had achieved both."

"Smith was locked up in Prince George's County awaiting trial on drug distribution charges when the letter of acceptance to the police academy arrived at his home. 'I've got good news and bad news,' Smith recalled his father saying. 'I can't get you out. But you got a job with the police department.'" The 12 articles are a must-read for police buffs. For a copy of the entire four-part series send four stamps and a reply envelope to Alan.

NEW 9-1-1 FOR DC. As of July 13, the Metropolitan Police Department began using a new 9-1-1 phone system. According to a Washington Times story, Bell Atlantic "will own and maintain the new digital computer system, but it will be operated by the police department, which will pay an undisclosed leasing fee." The new phones offer "Enhanced 9-1-1" capabilities, meaning the system identifies the phone number and location of all incoming calls.

FREE CELLULAR CALLS TO POLICE. If you have a cellular phone, you can now dial #-7-7 to reach Virginia State Police Division 7 headquarters in Fairfax. Virginia officials hope people will use the toll-free option to report accidents and drunk drivers. Maryland State Police already have such a system set up and receive about 1,000 calls per month, a recent Washington Post story reported. The three-digit number works through both the Cellular One and Bell Atlantic systems.

RADAR DETECTOR DETECTORS? The Maryland State Police are using new devices to enforce the federal Transportation Department's ban on the use of radar detectors in most commercial trucks and buses. The ban which took effect Jan. 19, noted Associated Press reporter Deb Riechmann, does not apply to cars.

From Feb. 1 to the end of July, Maryland troopers have discovered 309 radar detectors in commercial vehicles. Later this year Maryland State Police expect to have some 75 detector detectors in patrol cars.

A national motorists' rights group has filed suit to end the Federal Highway Administration's ban of radar detectors in commercial vehicles. The petition was filed in February in the US Court of Appeals for the 6th Circuit in Cincinnati by the Ohio-based Radio Association Defending Airwave Rights Inc. (RADAR), a nonprofit association representing those who make, sell and own radar detectors.

TOUR FEMA'S NATIONAL EMERGENCY TRAINING CENTER

Tour Set for Sat. Nov. 19, 1994

Gene Lichtman, who took us for a tour of the District Fire Department's communications center, invites us to tour FEMA's National Emergency Training Center, which includes the National Fire Training Academy, in Emmitsburg, Maryland (just 26 miles north of Frederick). For the exact time and directions contact Gene at 301-649-1321.

CRUISER COMPETITION

Set for Sun. Oct. 16

Hopefully you'll receive this newsletter in time so you can attend the annual "Cruiser Competition" sponsored by Professional Law Enforcement Services & Equipment at 4551 Rhode Island Ave. in Brentwood, Md. Last year almost every major local jurisdiction had a patrol car on display. The IRS, DEA and US Marshals also exhibited several exotic undercover vehicles with disguised antennas! This is an excellent opportunity to get a close-up look at area law enforcement vehicles (including their radios) and to speak with the officers who drive them. Patch collectors are welcome to come! Call 301-779-6919 for details.

HAVE YOU EXPERIENCED TROUBLE RECEIVING YOUR CHM NEWSLETTER?

For no apparent reason, we have received a higher-than-unusual number of comments regarding missing or damaged newsletters in the past few months. Feel free to report missing or damaged newsletters to Alan for replacement.

Please address all correspondence to Alan. We encourage readers to submit material and to write articles which relate to the hobby. All submissions are subject to editing for both style and content. When submitting material please make certain we have your phone number should we have any questions. We welcome frequency and visitor requests, but please include a SASE.

Alan Henney
6912 Prince George's Avenue
Takoma Park, MD 20912-5414
301-270-2531 (voice) / 301-270-5774 (fax)

Newsletter Staff:

Alan Henney, General Editor and Acting Treasurer
Bill Hardman, Executive Editor
Mike Peyton and Dave Clark, Distribution
Brent Baker, NewsScan Editor

The Capitol Hill Monitor is the non-profit monthly newsletter of the Capitol Hill Monitors. The newsletter keeps scanner enthusiasts abreast of local meetings, frequency profiles and other topics of interest. Dues (which includes 12 issues) are $8. Kindly make checks payable to Alan Henney.

Meeting Coordinators:

Mike Peyton, Maryland Coordinator (703-902-6241)
Ken Fowler, Virginia Coordinator (703-385-2165)

CHM Scanner/Shortwave Net

Listen for the CHM net, hosted by John Korman (N3RDC), at 7:30 P.M. on the first and third Monday of each month on 146.91 MHz.

Frequency Forum Computer Bulletin Board:

We encourage computer users to log onto Jack Anderson's Frequency Forum computer BBS at 703-207-9622 (8-N-1). Frequency Forum is the official electronic gathering place for readers of the Capitol Hill Monitor.

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LAST MINUTE UPDATES!!!

PGPD PROPOSE MORE CHANNEL CHANGES

On the morning of Oct. 17 the Prince George's County Police Department will begin to re-align its repeaters and simulcast the "C" and "F" sectors on channels 5 (494.5625) and 10 (495.2125). This, says PGPD Detective Frank Carson, is in preparation for the next phase:

On Nov. 14, the communications division plans a 30-day trial in which, based on the results of the Oct. 17 test, could place both the "C" and "F" sectors together on either channel 5 or 10. If the trial is successful, the two sectors will be dispatched on the same channel, although they have no borders in common.

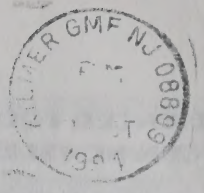
# # #

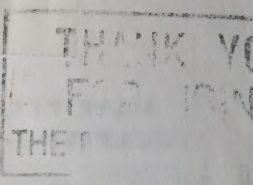
CHM MEETING NOTICE

The next CHM meeting is tentatively set for Saturday, December 3, 1994 at the Takoma Park City Hall, 7500 Maple Avenue. We hope to make it an early "season's greetings" party with possibly a guest speaker. If you have any ideas or are interested in helping out (we could use some good cookies!) please contact Alan (301-270-2531). Ho, ho, ho!

# # #

Capitol Hill Monitors
c/o Alan Henney
6912 Prince Georges Ave.
Takaoma Park, MD 20912-5414





6 Issues Remaining

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